

**ROCKY FLATS CITIZENS ADVISORY BOARD****MINUTES OF WORK SESSION****October 7, 1999**

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**FACILITATOR:** Reed Hodgkin

Jim Kinsinger called the meeting to order at 6:10 p.m.

**BOARD / EX-OFFICIO MEMBERS PRESENT:** Ray Betts, Shawn Burke, Eugene DeMayo, Jerry DePoorter, Joe Downey, Jeff Eggleston, Tom Gallegos, Mary Harlow, Victor Holm, Jim Kinsinger, Bill Kossack, Tom Marshall, LeRoy Moore, Markuené Sumler, Bryan Taylor / Mariane Anderson, Steve Gunderson, Joe Legare, Tim Rehder**BOARD / EX-OFFICIO MEMBERS ABSENT:** Susan Barron, Mary Mattson, David Navarro**PUBLIC / OBSERVERS PRESENT:** Robert W. Bistline (DOE/RFFO); David Grover (DNFSB); Bruce Dahm (Broomfield); Tom Stewart (citizen); Ann Lockhart (CDPHE); Don Owen (DNFSB); Ken Korkia (CAB staff); Erin Rogers (CAB staff); Deb Thompson (CAB staff); Brady Wilson (CAB staff)**PUBLIC COMMENT PERIOD:** No comments were received.**REGULATOR UPDATE (EPA):** Tim Rehder gave the EPA's quarterly update on Rocky Flats issues.

- The site just completed both the **East Trenches and Solar Ponds Plume Groundwater Treatment Systems**. Both of these activities were RFCA milestones, and were finished before the milestone deadline. The site was also successful in **removing all of the Category I and II special nuclear material from Building 776/777**. With completion of those two activities, the site was successful in meeting all its RFCA targets and milestones for the last fiscal year.
- The EPA has still been unsuccessful in its effort to issue a new Clean Water Act **NPDES permit**. This would affect the effluent from the Sewage Treatment Plant into the detention ponds on South Walnut Creek. Currently, the effluent from the plant is released into the middle pond, Pond B-3. The NPDES permit in place now does not have an end-of-pipe plutonium limit, so there is no enforceable limit on plutonium at the end of the pipe where it empties into Pond B-3. The current permit was issued in 1982, expired in 1987, and has been administratively extended since that time. The State of Colorado wants to put in place an enforceable plutonium limit at the end of the pipe. The state will not certify a new permit without that limit in place. DOE believes that issuing such a permit would violate the Atomic Energy Act exclusion for special nuclear materials under the Clean Water Act — i.e. you cannot regulate plutonium at the end of the pipe. DOE states it will continue to fight any attempts to do so. However, there are enforceable limits under the Superfund law at the outflows for both Ponds A-4 and B-5. The argument is over a stretch of water beginning at the

**ADMIN RECORD**

outflow from the Sewage Treatment Plant, and including three ponds. EPA has been trying to issue the permit, which must be certified by the state, but knows that no state certification is forthcoming without the conditions it has placed, and DOE will fight that condition. One problem that makes it difficult is that monitoring and sampling so far have not found any significant source of plutonium coming from the Sewage Treatment Plant. Tim noted that he is not sure EPA will ever be successful in issuing a new permit.

- The RFCA principals appeared to be headed toward a dispute over **RFCA milestones** for 2000 and outyears. The site has only agreed to one of the milestones proposed by EPA and CDPHE — that milestone involves the demolition of Building 779. The issues in dispute involve: whether milestones should be based on 2006 closure versus 2010 for outyear milestones; when the 903 Pad should be completed as the site would like to delay the remediation of this area in favor of completing other 2006 closure activities; whether there should be a milestone about closing the Protected Area; and also disputes about actual numbers of the activities to be completed. RFCA principals are scheduled to discuss the milestones on October 20.

\* On a related note, RFCAB members later discussed the dispute over RFCA milestones. Since the meeting of the RFCA principals is a closed meeting, some Board members would like the opportunity to give their thoughts and comments on proposed milestones, assumptions and expectations for cleanup. A group of Board members will meet over the next week to draft a letter incorporating comments for distribution to the RFCA principals prior to the October 20th meeting.

**PRESENTATION ON RESULTS OF ROCKY FLATS DOSE RECONSTRUCTION STUDY:** Jim LaVelle, a member of the Health Advisory Panel, attended the Board meeting and gave a presentation on the final report of the Panel, which was released in August 1999.

In July of 1990, CDPHE decided to undertake a two-phased study of the releases of toxic and radioactive materials from the Rocky Flats plant during its period of operation: 1952 to 1989. An oversight panel was put in place to supervise the project, which was called the Health Advisory Panel. The objectives of the study were primarily: 1) to create a public record of Rocky Flats Plant operations and events during its years of operation that may have caused offsite contaminant releases; 2) to assess public exposures and potential health risks to communities near Rocky Flats from past releases; and 3) to determine the need for future studies of health effects. Based on initial investigations, cancer was determined to be the primary focus — not because other health effects were not possible, but because cancer was a health effect that might be seen at the lowest possible exposures. The Phase I studies suggested that inhalation was the main route of exposure for all materials that were released from Rocky Flats, whether radioactive or toxic chemicals. The early studies also helped to narrow down the materials that were to be studied. As the study progressed, it was discovered that most all of the efforts could be focused on plutonium and carbon tetrachloride. When plutonium is inhaled, it is deposited into the deep lung and remains for a long period of time, causing a significant exposure. Thus, the inhalation pathway drove the studies.

The studies focused on three events at the plant, as well as routine operations. Hundreds of fires were found to have occurred during the plant's history, but most were very small fires, which were immediately controlled and did not result in any release. The three events that caused major releases included the 1957 fire, routine releases of carbon tetrachloride, and activities surrounding the 903 Pad area. Because one aspect of the study is that they were

reviewing events from 40+ years ago, all of the risk estimates and exposure estimates are given with a range of uncertainty. The studies attempted to look at all of the events, accidents and routine operations from many different perspectives. Thus there is no single value, assumption or uncertainty that controls the risk estimate.

The highest risks estimated in the study were for a person or laborer living near Leyden, who was outside and breathing heavily the night of the **1957 fire**. That is when the major release occurred. Meteorological analyses suggested that the plume initially started south from the plant and moved south until it hit the drainage flows going down the Platte River Valley, and then turned toward the northeast. The highest potential plutonium concentrations in the air then would have been in the Leyden area. During the fire, the heat drove the smoke up the stack, the plume became airborne and wind carried it above ground until it was far south of the plant. Workers at the plant most likely were not exposed at all, but as the plume moved south, potential exposures got higher. Right after the fire, plant workers collected vegetation samples near the buildings. However, the plume was never in that area. The monitoring data for the 1957 fire thus was not helpful to the Health Advisory Panel's findings. However, it should be noted that the pattern of high risk was only true for a very short period of time when the releases from the fire were occurring and for a short time thereafter.

The releases of plutonium from the **903 Pad** — a barrel storage area — occurred when prevailing winds were from west to east. The highest risks were for people living offsite, just east of Indiana Avenue. The releases occurred primarily during the attempt to remediate the plutonium that had leaked to the soil from the drums between 1968 and 1970. The barrels were removed, dirt underneath the barrels was moved, and a lot of dust was created. Several high wind events moved the bulk of the material. Some of the plutonium dispersion from the 903 Pad did occur when the winds were lighter and blowing in a different direction. Thus, some smaller particles of plutonium did move toward the western side of the plant.

**Carbon tetrachloride** was routinely released from the plant. It was used to clean metal parts and to wipe down gloveboxes, among other things. Most of it evaporated and there were no systems at the plant to reduce emissions, so releases of carbon tetrachloride were common out of the stacks or roof vents. The plume pattern reflects the overall average meteorology of the area. The highest risks are east of the plant on Indiana. However, people must have been living near the plant from 1952 to 1989 to receive enough exposure for these risks to apply. It is not based on one event, but rather throughout the entire history of the plant. No one is believed to have lived in that area the entire time the plant was in operation, but some did live in more outlying areas.

The highest lifetime cancer risks are about 1 in 10,000 — following the 1957 fire. The highest risk for carbon tetrachloride exposure is not quite as high as that for exposure to plutonium following the 1957 fire, but the average is about the same. Being right in the plume of the 1957 fire — for those few hours immediately following the event — would have been similar to living at the east end of Rocky Flats during its entire history and inhaling carbon tetrachloride.

In summary, the risks appear to be very low, even for someone standing outside in Leyden following the 1957 fire. Other cancer risks compiled from the Colorado Cancer Registry show the risk of dying from cancer in Colorado is about 1 in 5. The risk of dying from lung cancer in Colorado is 1 in 17. The risk of dying from lung cancer caused by natural

background radiation in Denver is 1 in 30. The risk of dying from cancer caused by second-hand smoke is 1 in 1,000. And finally, the highest estimates for the 1957 fire are about 1 in 10,000.

The major conclusions were that the risks of developing cancer from events or releases at the Rocky Flats were too low to justify a health effects study.

**PUBLIC COMMENT PERIOD:** No comments were received.

**RFCAB VIDEO:** Erin Rogers, RFCAB staff member, submitted a proposal to the Board to produce an informational video on both the site and the Board. DOE representatives at the site have expressed a willingness to assist in the production of the video, so RFCAB funds would not be used. However, the site would need to have final review of the product. Erin noted that the video most likely would build from RFCAB's slideshow, and include some element of public involvement and membership recruitment. Her idea is to have the video cover basic Rocky Flats history, current cleanup status and future plans, then finally focus on the Board itself. Board members will have final approval of the script, but then the project would be turned over to DOE production personnel to finalize the video. RFCAB approved going forward with planning for the video. Four Board members volunteered to work on a committee with Erin to plan the video and begin preparation of the script for the Board's approval.

#### **TRANSPORTATION RECOMMENDATIONS FROM NATIONAL SSAB**

**MEETING:** In May, four Board members attended an intersite discussion for SSABs — the National Transportation Workshop — held at the Fernald site in Ohio. Participants in the workshop produced a set of eight statements. Each respective Board was then asked to consider those statements and, if approved, to forward to DOE-Headquarters. RFCAB was asked to now consider those statements and proceed with one of a few options: either to approve each statement as is, modify the language, or to choose not to endorse any or all of the statements. Some Board members were uncomfortable with many of the statements, and others did not feel approving the statements or continuing to spend a lot of time on this project would be valuable. It was mentioned that RFCAB did approve a recommendation a couple years ago on transportation issues, and that may be used as a basis for considering these statements. Finally, the Board agreed that the four Board members who participated in the SSAB National Transportation Workshop, as well as any other interested members, should meet to discuss the statements, and try to include some of the Board's concerns and comments in its action for the Board's approval. Suggestions included: 1) drafting a letter transmitting the Board's previous recommendation, 2) to prepare a new recommendation incorporating some of the Board members concerns and comments, or 3) finding a way to frame the workshop statements in a way that may be more acceptable.

**DISCUSSION OF RFCAB RETREAT:** The Executive Committee met shortly after the Board's retreat, and discussed some of the issues that came out of the retreat about how the Board process works, and how Board members work together. The Executive Committee has suggested that at each monthly Board meeting, a short time period of 15 minutes be set aside to discuss a topic brought forth at the retreat. At this meeting, Reed Hodgins, the Board's facilitator, started by framing for the Board its consensus process, briefly talking about how conflict resolution can be successful, resolving conflict in a constructive rather than destructive way, and the difference between alternate decision-making processes: majority rule, compromise, consensus, survey, and group-think. Reed suggested that the Board work over the next year on helping to identify key interests of its Board members in

order to better understand one another.

**APPROVE RFCAB BUDGET AND WORK PLAN FOR 2000:** Following the September 12 retreat, staff prepared a final version of the RFCAB 2000 Work Plan and corresponding budget. The Board's grant with DOE will expire on September 30, 2000, so RFCAB was asked to prepare a nine-month budget for this grant submission. The budget now reflects Board costs for the first three quarters of 2000. RFCAB will need to submit a new grant application and budget again at the end of the summer to cover expenses for the remainder of 2000. The budget (at 3/4 of a year) requests approximately \$260,000 in new funds for Board operations, and an additional \$112,500 for the ComRad pass-through project. The Soil Action Levels project is anticipated to be completed the first quarter of 2000; some carryover funds have been identified for that project. The budget is consistent with what has been requested the past few years.

RFCAB's work plan reflects what was agreed upon at last month's retreat. For its operation over the coming year, the Board will handle its work priorities in three primary ways:

- **Full Board discussion.** Some issues will be considered by the Board as a whole during its monthly meetings — those include public participation guidelines, a continued discussion of the vision, the site's 2006 Baseline, risk assessment education, and conversations about the Rocky Flats Cleanup Agreement.
- **Focus groups/committees.** Some issues may be addressed through either an ad-hoc committee or focus group, such as D&D/environmental restoration documents and reports. In addition, the Soil Action Levels Oversight Panel will continue through the beginning of 2000, work continues on the Stewardship Task Force as well as the Actinide Migration Evaluation Technical Review Group, and it is anticipated that RFCAB will work with a community group discussing Rocky Flats budget issues.
- **Tracking/monitoring issues.** Staff and Board members will track issues that are of interest to RFCAB, but that may not require recommendations and/or comments. Some of those issues identified as being of interest to the Board are Kaiser-Hill's contract renewal, cleanup technology, RFCAB's vision, nuclear materials and waste disposition, orphan waste, surface water management, worker health and safety, heritage preservation, transportation, and ecology/natural resource issues.

The Board will continue to monitor two contractual items — the Soil Action Levels Independent Review Project, and the ComRad Program pass-through contract. RFCAB will also continue its administrative, outreach and intersite activities as in years past.

RFCAB approved both the work plan and budget as submitted, with minor changes.

**STEWARDSHIP DISCUSSION:** Five Board members will attend the next SSAB national workshop (on stewardship issues) to be held at Oak Ridge from October 25th through the 28th. The participants asked fellow Board members to submit their initial thoughts and ideas about stewardship, how it relates to Rocky Flats specifically, and what is the relationship between stewardship and cleanup. This information will help the attendees frame their discussions during participation at the workshop sessions. Since time was limited at this meeting for collecting comments, Board members were encouraged to submit their ideas via email.

**RFCAB VISION WRAP-UP DISCUSSION:** The culmination of one year of work, the

Board at this meeting gave final approval to its vision for the cleanup of Rocky Flats. A few comments and changes were made to the final draft of this document — specifically the sections on environmental restoration and cleanup levels at the end of regulatory cleanup, the section on cleanup principles, and the section on the use of protective caps. The approval date will be changed to October 1999. Staff will make the final revisions, and send the document to be printed and distributed per the Board's plans.

**NEXT MEETING:**

**Date:** November 4, 6 - 9:30 p.m.

**Location:** College Hill Library, Front Range Community College, 3705 West 112<sup>th</sup> Avenue, Westminster

**Agenda:** Presentation on and discussion of 2006 Baseline; update by Kaiser-Hill on waste/materials disposition; election of officers and membership term renewals; update on SSAB stewardship workshop; Board process discussion

**ACTION ITEM SUMMARY: ASSIGNED TO:**

1. Meet to prepare letter/comments to RFCA principals about establishment of RFCA milestones - Victor, Jim, Tom Marshall
2. Meet to discuss next steps for SSAB transportation workshop comments - Shawn, Victor, Jerry, Bryan
3. Prepare grant application for 2000 budget; submit to DOE - Staff
4. Submit comments and thoughts on stewardship issues via email - Board members
5. Finalize RFCAB vision, send to printer - Staff

**MEETING ADJOURNED AT 9:50 P.M. \***

(\* Taped transcript of full meeting is available in CAB office.)

**RESPECTFULLY SUBMITTED:**

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Mary Harlow, Secretary  
Rocky Flats Citizens Advisory Board

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The Rocky Flats Citizens Advisory Board is a community advisory group that reviews and provides recommendations on cleanup plans for Rocky Flats, a former nuclear weapons plant outside of Denver, Colorado.

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